

## SAFETY DATA SHEET

Revision Date 14-Feb-2020

Revision Number 2

### 1. Identification

**Product Name** Tetraphenylphosphonium tetrafluoroborate**Cat No. :** A15141**CAS-No** 426-79-9**Synonyms** No information available**Recommended Use** Laboratory chemicals.**Uses advised against** Food, drug, pesticide or biocidal product use.**Details of the supplier of the safety data sheet****Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Acute oral toxicity                              | Category 4 |
| Acute dermal toxicity                            | Category 4 |
| Acute Inhalation Toxicity - Dusts and Mists      | Category 4 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

**Label Elements****Signal Word**

Warning

**Hazard Statements**

Causes skin irritation  
Causes serious eye irritation

May cause respiratory irritation  
Harmful if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
Call a POISON CENTER or doctor/physician if you feel unwell  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component                                | CAS-No   | Weight % |
|------------------------------------------|----------|----------|
| Tetraphenylphosphonium tetrafluoroborate | 426-79-9 | > 98     |

### 4. First-aid measures

|                     |                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.              |
| <b>Skin Contact</b> | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. |
| <b>Inhalation</b>   | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.   |
| <b>Ingestion</b>    | Clean mouth with water. Get medical attention.                                                                               |

|                                            |                           |
|--------------------------------------------|---------------------------|
| <b>Most important symptoms and effects</b> | No information available. |
| <b>Notes to Physician</b>                  | Treat symptomatically     |

## 5. Fire-fighting measures

|                                         |                                                                 |
|-----------------------------------------|-----------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>     | Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                        |
| <b>Flash Point</b>                      | No information available                                        |
| <b>Method -</b>                         | No information available                                        |
| <b>Autoignition Temperature</b>         | No information available                                        |
| <b>Explosion Limits</b>                 |                                                                 |
| <b>Upper</b>                            | No data available                                               |
| <b>Lower</b>                            | No data available                                               |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                        |
| <b>Sensitivity to Static Discharge</b>  | No information available                                        |

### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Oxides of phosphorus. Gaseous hydrogen fluoride (HF). Hydrogen chloride gas.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
2

**Flammability**  
1

**Instability**  
1

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                  |                                                                             |
|----------------------------------|-----------------------------------------------------------------------------|
| <b>Personal Precautions</b>      | Ensure adequate ventilation. Use personal protective equipment as required. |
| <b>Environmental Precautions</b> | See Section 12 for additional Ecological Information.                       |

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

|                 |                                                                                                                                                                              |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Avoid contact with skin and eyes. Do not breathe dust. Handle product only in closed system or provide appropriate exhaust ventilation.                                      |
| <b>Storage</b>  | Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. |

## 8. Exposure controls / personal protection

|                            |                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure Guidelines</b> | This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies. |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|

|                             |                                                                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering Measures</b> | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

**Personal Protective Equipment**

|                                 |                                                                                                                                                                                                                                                   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye/face Protection</b>      | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.                                                                       |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                                                                                         |
| <b>Respiratory Protection</b>   | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

**9. Physical and chemical properties**

|                                               |                                                      |
|-----------------------------------------------|------------------------------------------------------|
| <b>Physical State</b>                         | Solid                                                |
| <b>Appearance</b>                             | White                                                |
| <b>Odor</b>                                   | No information available                             |
| <b>Odor Threshold</b>                         | No information available                             |
| <b>pH</b>                                     | No information available                             |
| <b>Melting Point/Range</b>                    | 300 °C / 572 °F                                      |
| <b>Boiling Point/Range</b>                    | No information available                             |
| <b>Flash Point</b>                            | No information available                             |
| <b>Evaporation Rate</b>                       | Not applicable                                       |
| <b>Flammability (solid,gas)</b>               | No information available                             |
| <b>Flammability or explosive limits</b>       |                                                      |
| Upper                                         | No data available                                    |
| Lower                                         | No data available                                    |
| <b>Vapor Pressure</b>                         | No information available                             |
| <b>Vapor Density</b>                          | Not applicable                                       |
| <b>Specific Gravity</b>                       | No information available                             |
| <b>Solubility</b>                             | No information available                             |
| <b>Partition coefficient; n-octanol/water</b> | No data available                                    |
| <b>Autoignition Temperature</b>               | No information available                             |
| <b>Decomposition Temperature</b>              | No information available                             |
| <b>Viscosity</b>                              | Not applicable                                       |
| <b>Molecular Formula</b>                      | C <sub>24</sub> H <sub>20</sub> P . B F <sub>4</sub> |
| <b>Molecular Weight</b>                       | 426.21                                               |

**10. Stability and reactivity**

|                                         |                                                                                                                                                                          |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                                                                                               |
| <b>Stability</b>                        | Hygroscopic.                                                                                                                                                             |
| <b>Conditions to Avoid</b>              | Incompatible products. Exposure to moist air or water.                                                                                                                   |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong bases                                                                                                                                    |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NO <sub>x</sub> ), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Oxides of phosphorus, Gaseous hydrogen fluoride (HF), Hydrogen chloride gas |
| <b>Hazardous Polymerization</b>         | No information available.                                                                                                                                                |
| <b>Hazardous Reactions</b>              | None under normal processing.                                                                                                                                            |

**11. Toxicological information****Acute Toxicity**

**Product Information****Component Information**

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                                | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|------------------------------------------|----------|------------|------------|------------|------------|------------|
| Tetraphenylphosphonium tetrafluoroborate | 426-79-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. Regulatory information

**United States of America Inventory**

| Component                                | CAS-No   | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|------------------------------------------|----------|------|-----------------------------------------------|-----------------------------|
| Tetraphenylphosphonium tetrafluoroborate | 426-79-9 | -    | -                                             | -                           |

**Legend:**

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component                                | CAS-No   | DSL | NDSL | EINECS    | PICCS | ENCS | AICS | IECSC | KECL |
|------------------------------------------|----------|-----|------|-----------|-------|------|------|-------|------|
| Tetraphenylphosphonium tetrafluoroborate | 426-79-9 | -   | -    | 207-044-1 | -     | X    | -    | -     | -    |

**U.S. Federal Regulations**

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade No information available

**16. Other information****Prepared By**

Health, Safety and Environmental Department  
 Email: tech@alfa.com  
 www.alfa.com

|                         |                                                                  |
|-------------------------|------------------------------------------------------------------|
| <b>Revision Date</b>    | 14-Feb-2020                                                      |
| <b>Print Date</b>       | 14-Feb-2020                                                      |
| <b>Revision Summary</b> | SDS authoring systems update, replaces ChemGes SDS No. 426-79-9. |

**Disclaimer**

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**End of SDS**